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2151

DATE MAILED: 06/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,150

Applicant(s)

ELLIOTT ET AL.

Examiner

Nghi V. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 66-138 is/are pending in the application.
- 4a) Of the above claim(s) 66-81 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 82-138 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 66-138 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 04/12/02&05/13/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election of Group II, claims 82-138, in the reply filed on April 21, 2005 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

2. Claims 66-81 withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group I, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 21, 2005.

Specification

3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 82, 83, 85-87, 89-93, 107-113 and 125-126 are rejected under 35

U.S.C. 102(e) as being anticipated by Meier, U.S. Patent No. 6,407,991.

6. With respect to claims 82 and 107, Meier teaches a self-configuring wireless network [see abstract], comprising:

(i) a network cluster [figs.1-2], comprising:

- a first sub-network including at least one self-configuring virtual node [col.2, lns.56-65];
- a second sub-network including at least one self-configuring virtual node [col.4, lns.1-34],
- wherein the first and second sub-networks are communicatively coupled to each other via a wireless communication link between the respective at least one self-configuring virtual nodes [col.7, ln.9 - col.8, ln.29], and

(ii) a virtual gate being communicatively coupled to the first and/or second sub-networks and configured to provide a communication access point [269, 275, 277, and 279 i.e. the WMAP] between the network cluster and at least one external network [fig.6-8].

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7. With respect to claims 83 and 108, Meier further teaches the respective at least one virtual nodes are configured to execute a self-configuration cycle to establish connectivity with a portion of the network cluster [fig.8].

8. With respect to claim 85, Meier further teaches the respective at least one virtual nodes stores information regarding the identities and/or location of the at least one virtual nodes and other nodes of the network cluster [col.9, Ins.4-43].

9. With respect to claims 86 and 109, Meier further teaches the respective at least one virtual nodes include a routing table that comprises routing information about the at least one virtual nodes and other nodes of the network cluster [col.6, Ins.40-43 and col.7, ln.44 - col.8, ln.14].

10. With respect to claim 87, Meier further teaches the respective at least one virtual nodes are configured to execute a polling procedure to poll the at least the at least one virtual nodes and other nodes of the network cluster [col.9, ln.44 - col.10, ln.13].

11. With respect to claims 89 and 110, Meier further teaches the virtual gate comprises a computer network gateway [col.8, Ins.50-62].

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12. With respect to claims 90 and 113, Meier further teaches the virtual gate stores geographic location of all virtual nodes within a pre specified distance of the virtual gate [col.6, Ins.40-43, col.7, Ins.10-50, and col.9, Ins.32-43].

13. With respect to claim 91, Meier further teaches the respective at least one virtual nodes communicate under a wireless transmission protocol [fig.2].

14. With respect to claim 92, Meier further teaches the wireless transmission protocol employs at least one multiplexed communication channel such that each multiplexed channel employs a different transmission frequency [fig.4 and col.9, Ins.32-43].

15. With respect to claim 93, Meier further teaches a first protocol channel is used for upstream communication and a second protocol channel is used for downstream communication [col.7, Ins.22-50].

16. With respect to claim 111, Meier further teaches the virtual gate wireless communicates with the at least one external network [fig.6 and see abstract].

17. With respect to claim 112, Meier further teaches the virtual gate communicates with the at least one external network via wired communication [fig.2].

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18. With respect to claim 125, Meier further teaches the communications interface includes a network interface [figs.6-8].

19. With respect to claim 126, Meier is further teaches the network interface comprises a Bluetooth interface, a cellular communication interface, a satellite communication interface, an Internet interface, a power distribution network interface, and/or any interface configured to operatively communicate with any other public or private network [figs.6-8].

20. Claims 94-97 and 105-106 are rejected under 35 U.S.C. 102(e) as being anticipated by Zintel et al., U.S. Patent No. 6,725,281 (hereinafter Zintel).

21. With respect to claim 94, Zintel teaches a virtual network operations entity associated with a self-configuring wireless communication network [see abstract and figs.1-4, 5, 22, and 27-28], said virtual network operating entity comprising:

- a communication interface configured to accommodate a plurality of communication protocols to facilitate communications between the self-configuring wireless communication network and at least one external network [figs.27-28];
- an event naming module configured to identify pre-specified events [col.7, ln.30 - col.8, ln.33 and col.11, lns.6-67];

- an event database configured to store information regarding the pre-specified events [col.9, Ins.4 - 59];
- an event management module configured to process and manage occurrences of the pre-specified events [fig.22 and col.10, Ins.5-67]; and
- a communication management module configured to manage communication of the pre-specified events between the self-configuring wireless communication network and the at least one external network [figs.25-26].

22. With respect to claim 95, Zintel further teaches a configuration management module that specifies one or more of interface information, protocol information, and pre-specified services [fig.22].

23. With respect to claim 96, Zintel further teaches a security management module that manages security of communications between the self-configuring wireless communication network and at least one external network [col.49, Ins.4-23].

24. With respect to claim 97, Zintel further teaches an error and recovery management module that manages detection of, and recovery from, communication errors [col.35, ln.64 - col.36, ln.55].

25. With respect to claim 105, Zintel further teaches the communications interface includes a network interface [figs.27-28].

26. With respect to claim 106, Zintel further teaches the network interface comprises a Bluetooth interface, a cellular communication interface, a satellite communication interface, an Internet interface, a power distribution network interface, and/or any interface configured to operatively communicate with any other public or private network [fig.30 and col.45, ln.58 - col.46, ln.5].

27. Claims 127 and 131-132 are rejected under 35 U.S.C. 102(e) as being anticipated by Riihinen et al., U.S. Patent No. 6,697,331 (hereinafter Riihinen).

28. With respect to claim 127, Riihinen teaches a method of configuring a virtual node [see abstract and fig.1], comprising:

- executing a self configuration cycle to initialize connectivity with an associated first wireless sub-network [fig.8];
- periodically polling other virtual nodes of the first wireless sub-network [fig.8];
- executing the self-configuration cycle to establish connectivity with a second wireless sub-network if the initial connectivity with the first wireless sub-network fails or if connectivity with the first wireless sub-network has been subsequently disrupted [fig.4].

29. With respect to claim 131, Riihinen further teaches routing information regarding other virtual nodes associated with the first and/or second wireless networks [fig.4].

30. With respect to claim 132, Riihinen further teaches encrypting capability to encrypt communications [col.5, Ins.47-67].

Claim Rejections - 35 USC § 103

31. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

32. Claim 84 and 114-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier as applied to claims 82 and 107 above, and further in view of Zintel et al., U.S. Patent No. 6,725,281 (hereinafter Zintel).

33. With respect to claim 84, Meier is silent on the self-configuration cycle is executed upon initialization and/or upon a detected disruption in connectivity.

In a self-configuring wireless network, Zintel discloses the self-configuration cycle is executed upon initialization and/or upon a detected disruption in connectivity [col.31, Ins.50-61 and col.47, Ins.59-65].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Zintel by executing upon initialization and/or upon a detected disruption in connectivity because this feature

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supports automatic discovery, identification, and configuration [Zintel, col.47, Ins.66-67].

It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Zintel in order to allow an operating system to immediately begin using added devices or stop using removed devices without rebooting [Zintel, col.47, Ins.63-65].

34. With respect to claim 114, Meier is silent on a communication interface configured to accommodate a plurality of communication protocols to facilitate communications between the self-configuring wireless communication network and at least one external network; an event naming module configured to identify pre-specified events; an event database configured to store information regarding the pre-specified events; an event management module configured to process and manage occurrences of the pre-specified events; and a communication management module configured to manage communication of the pre-specified events between the self-configuring wireless communication network and the at least one external network

Zintel discloses a virtual network operations entity associated with a self-configuring wireless communication network [see abstract and figs.1-4, 5, 22, and 27-28], said virtual network operating entity comprising:

- a communication interface configured to accommodate a plurality of communication protocols to facilitate communications between the self-configuring wireless communication network and at least one external network [figs.27-28];

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- an event naming module configured to identify pre-specified events [col.7, ln.30 - col.8, ln.33 and col.11, lns.6-67];
- an event database configured to store information regarding the pre-specified events [col.9, lns.4 - 59];
- an event management module configured to process and manage occurrences of the pre-specified events [fig.22 and col.10, lns.5-67]; and
- a communication management module configured to manage communication of the pre-specified events between the self-configuring wireless communication network and the at least one external network [figs.25-26].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Zintel by associating a virtual network operations entity with a self-configuring wireless communication network because this feature supports automatic discovery, identification, and configuration [Zintel, col.47, lns.66-67]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Zintel in order to allow an operating system to immediately begin using added devices or stop using removed devices without rebooting [Zintel, col.47, lns.63-65].

35. With respect to claim 115, Meier is silent on a configuration management module that specifies one or more of interface information, protocol information, and pre-specified services.

In a communication system, Zintel discloses a configuration management module that specifies one or more of interface information, protocol information, and pre-specified services [fig.22].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Zintel by adding a configuration management module because this feature supports automatic discovery, identification, and configuration [Zintel, col.47, Ins.66-67]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Zintel in order to allow an operating system to immediately begin using added devices or stop using removed devices without rebooting [Zintel, col.47, Ins.63-65].

36. With respect to claim 116, Meier is silent on a security management module that manages security of communications between the self-configuring wireless communication network and at least one external network [col.49, Ins.4-23].

In a communication system, Zintel discloses a security management module that manages security of communications between the self-configuring wireless communication network and at least one external network [col.49, Ins.4-23].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Zintel by adding security management module because this feature prevents unauthorized access unwanted sessions from remaining open in the event of client application failures or user neglect

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[Devine, col.4, Ins.7-9]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Zintel in order to allow users to access the individual client applications via the backplane unit securely [Devine, col.3, Ins.15-17].

37. With respect to claim 117, Meier is silent on an error and recovery management module that manages detection of, and recovery from, communication errors.

In a communication system, Zintel discloses an error and recovery management module that manages detection of, and recovery from, communication errors [col.35, ln.64 - col.36, ln.55].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Zintel by adding an error and recovery management module because this feature supports automatic discovery, identification, and configuration [Zintel, col.47, Ins.66-67]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Zintel in order to allow an operating system to immediately begin using added devices or stop using removed devices without rebooting [Zintel, col.47, Ins.63-65].

38. Claim 88 is rejected under 35 U.S.C. 103(a) as being unpatentable over Meier as applied to claims 82 above, and further in view of Devine et al., U.S. Patent No. 6,606,708 (hereinafter Devine).

39. With respect to claim 88, Meier is silent on the respective at least one virtual nodes are configured with encryption capability to encrypt communications between the at least one virtual nodes and other nodes of the network cluster.

In a communication system, Devine discloses the respective at least one virtual nodes are configured with encryption capability to encrypt communications between the at least one virtual nodes and other nodes of the network cluster [fig.1].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by configuring at least one virtual nodes with encryption capability because this feature prevents unauthorized access unwanted sessions from remaining open in the event of client application failures or user neglect [Devine, col.4, lns.7-9]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to allow users to access the individual client applications via the backplane unit securely [Devine, col.3, lns.15-17].

40. Claims 98-104 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zintel as applied to claims 94 above, and further in view of Devine et al., U.S. Patent No. 6,606,708 (hereinafter Devine).

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41. With respect to claim 98, Zintel is silent on a replication redundancy management module that replicates attribute information regarding the self-configuration wireless communication network.

In a communication system, Devine discloses a replication redundancy management module that replicates attribute information regarding the self-configuration wireless communication network [col.23, Ins.4-64].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by adding a replication redundancy management module because this feature provides for redundancy and failover capability [Devine, col.23, Ins.11-12]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to provide the communication link more reliable.

42. With respect to claim 99, Zintel is silent on a billing module that tracks and bills usage of services provided by the self-configuring wireless communication network.

In a communication system, Devine discloses a billing module that tracks and bills usage of services provided by the self-configuring wireless communication network [col.5, Ins.35-53].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by tracking and billing usage of service provided because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art

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at the time of the invention would have been motivated to modify Zintel in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

43. With respect to claim 100, Zintel is silent on an audit and logging module.

In a communication system, Devine discloses an audit and logging module [col.6, Ins.38-67].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by adding an audit and logging module because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

44. With respect to claim 101, Zintel is silent on a publication and subscription management module that manages the publication of the occurrences of the pre-specified events.

In a communication system, Devine discloses a publication and subscription management module that manages the publication of the occurrences of the pre-specified events [fig.6 and col.2, ln.56 - col.3, ln.64].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by adding a publication and subscription management module because this feature significantly

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simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

45. With respect to claim 102, Zintel is silent on communication interface facilitates remote monitoring of at least one node of the self-configuring wireless communication network.

In a communication system, Devine discloses communication interface facilitates remote monitoring of at least one node of the self-configuring wireless communication network [figs.2-4 and col.9, ln.42- col.10, ln.35].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by facilitating remote monitoring of at least one node of the self-configuring wireless communication network because this feature provides the ability to define and request a variety of reports [Devine, col.7, Ins.27-40]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to provide virtual data network alarms and performance reports [Devine, col.9, Ins.50-59].

46. With respect to claim 103, Zintel is silent on the communication interface includes a customer interface.

In a communication system, Devine discloses the communication interface includes a customer interface.

[fig.4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by including a customer interface because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

47. With respect to claim 104, Zintel is silent on the customer interface comprises a web browser interface, electronic mail interface, a customized Internet Protocol application interface, a telephone interface, a modem interface, and/or a paging device interface.

In a communication system, Devine discloses the customer interface comprises a web browser interface, electronic mail interface, a customized Internet Protocol application interface, a telephone interface, a modem interface, and/or a paging device interface [fig.3-4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Zintel in view of Devine by including a web browser interface because this feature allows easy and convenient access from the user's perspective [Devine, col.2, Ins.60-65]. It is for this reason that one of ordinary

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skill in the art at the time of the invention would have been motivated to modify Zintel in view of Devine in order to provide cross-platform software operability that is not dependent on a specific operating system [Devine, col.2, lns.66-67].

48. Claims 118-124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier as applied to claim 107 above, and further in view of Devine et al., U.S. Patent No. 6,606,708 (hereinafter Devine).

49. With respect to claim 118, Meier is silent on a replication redundancy management module that replicates attribute information regarding the self-configuration wireless communication network.

In a communication system, Devine discloses a replication redundancy management module that replicates attribute information regarding the self-configuration wireless communication network [col.23, lns.4-64].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by adding a replication redundancy management module because this feature provides for redundancy and failover capability [Devine, col.23, lns.11-12]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to provide the communication link more reliable.

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50. With respect to claim 119, Meier is silent on a billing module that tracks and bills usage of services provided by the self-configuring wireless communication network.

In a communication system, Devine discloses a billing module that tracks and bills usage of services provided by the self-configuring wireless communication network [col.5, Ins.35-53].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by tracking and billing usage of service provided because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

51. With respect to claim 120, Meier is silent on an audit and logging module.

In a communication system, Devine discloses an audit and logging module [col.6, Ins.38-67].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by adding an audit and logging module because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

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52. With respect to claim 121, Meier is silent on a publication and subscription management module that manages the publication of the occurrences of the pre-specified events.

In a communication system, Devine discloses a publication and subscription management module that manages the publication of the occurrences of the pre-specified events [fig.6 and col.2, ln.56 - col.3, ln.64].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by adding a publication and subscription management module because this feature significantly simplifies the enterprise burden [Devine, col.2, lns.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to improve customer service and lower costs [Devine, col.1, lns.33-60].

53. With respect to claim 122, Meier is silent on communication interface facilitates remote monitoring of at least one node of the self-configuring wireless communication network.

In a communication system, Devine discloses communication interface facilitates remote monitoring of at least one node of the self-configuring wireless communication network [figs.2-4 and col.9, ln.42- col.10, ln.35].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by facilitating remote

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monitoring of at least one node of the self-configuring wireless communication network because this feature provides the ability to define and request a variety of reports [Devine, col.7, Ins.27-40]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to provide virtual data network alarms and performance reports [Devine, col.9, Ins.50-59].

54. With respect to claim 123, Meier is silent on the communication interface includes a customer interface.

In a communication system, Devine discloses the communication interface includes a customer interface.

[fig.4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by including a customer interface because this feature significantly simplifies the enterprise burden [Devine, col.2, Ins.38-39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to improve customer service and lower costs [Devine, col.1, Ins.33-60].

55. With respect to claim 124, Meier is silent on the customer interface comprises a web browser interface, electronic mail interface, a customized Internet Protocol

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application interface, a telephone interface, a modem interface, and/or a paging device interface.

In a communication system, Devine discloses the customer interface comprises a web browser interface, electronic mail interface, a customized Internet Protocol application interface, a telephone interface, a modem interface, and/or a paging device interface [fig.3-4].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Devine by including a web browser interface because this feature allows easy and convenient access from the user's perspective [Devine, col.2, lns.60-65]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Devine in order to provide cross-platform software operability that is not dependent on a specific operating system [Devine, col.2, lns.66-67].

56. Claim 128 is rejected under 35 U.S.C. 103(a) as being unpatentable over Riihinen as applied to claim 127 above, and further in view of Bielefeld et al., U.S. Patent No. 6,400,949 (hereinafter Bielefeld).

57. With respect to claim 128, Riihinen is silent on the self configuring cycle is based on a set of transmission rules comprising connecting only with a sub-network having a virtual node, specifying a maximum number of node hops that can be used to reach a

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communication point, and/or connecting to a sub-network having the smallest number of node hops to the communication point.

In a communication method, Bielefeld discloses the self configuring cycle is based on a set of transmission rules comprising connecting only with a sub-network having a virtual node, specifying a maximum number of node hops that can be used to reach a communication point, and/or connecting to a sub-network having the smallest number of node hops to the communication point [col. 1, ln.47 - col.2, ln.48].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Riihinen in view of Bielefeld by specifying a maximum number of node hops that can be used to reach a communication point because this feature reduces delay. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Riihinen in view of Bielefeld in order to prevent the mobile parts from sending request information for the setup of a connection at time slots at which the base station is not ready to received [Bielefeld, col.6, lns.63-67].

58. Claims 129-130 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riihinen as applied to claim 127 above, and further in view of Vannucci, U.S. Patent No. 5,459,727.

59. With respect to claims 129-130, Riihinen is silent on including information regarding the geographic location of the closest communication point.

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In a communication method, Vannucci discloses including information regarding the geographic location of the closest communication point [col.11, ln.30 - col.12, ln.12].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Riihinen in view of Vannucci by including information regarding the geographic location of the closet communication point because this feature reduces power-supply demand [Vannucci, col.3, ln.30 - col.4, ln.39]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Riihinen in view of Vannucci in order to automatically keep the communication bursts from one region out of the way of the signaling bursts of an adjacent region [Vannucci, col.12, lns.8-10].

60. Claims 133-134 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier, U.S. Patent No. 6,407,991, in view of Vimpari, U.S. Patent No. 6,577,671.

61. With respect to claim 133, Meier teaches a method of configuring a network containing a plurality of virtual nodes and at least one virtual gate [figs.6-8], said method comprising:

- broadcasting a request for the virtual gate [col.7, ln.44 - col.8, ln.29];
- storing a route to the virtual gate in a routing table based on a response from a virtual node [col.7, lns.10-50];
- storing transport-agent parameters for access to the virtual gate in the routing table if a message is received from the virtual gate [col.6, lns.24-62];

However, Meier is silent on configuring a metric indicating proximity to the virtual gate.

In a communication method, Vimpari discloses configuring a metric indicating proximity to the virtual gate [see abstract and fig.5].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Vimpari by configuring a metric indicating proximity to the virtual gate because this feature enable a preading code handover technique [Vimpari, col.3, lns.26-33]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Vimpari in order to establish a fixed performance table or a dynamic performance table in real-time [Vimpari, col.3, lns.19-25].

62. With respect to claim 134, Meier is silent on the metric comprises 0 if the access to the designated virtual gate comprises a direct link.

In a communication method, Vimpari discloses the metric comprises 0 if the access to the designated virtual gate comprises a direct link [fig.5; col.3, lns.62-64; col.3, lns.18-25; and col.4, lns.33-44].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Vimpari by the metric comprises 0 if the access to the designated virtual gate comprises a direct link because this feature enable a preading code handover technique [Vimpari, col.3, lns.26-33]. It is for this reason that one of ordinary skill in the art at the time of the invention would have

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been motivated to modify Meier in view of Vimpari in order to establish a fixed performance table or a dynamic performance table in real-time [Vimpari, col.3, Ins.19-25].

63. Claims 135-138 are rejected under 35 U.S.C. 103(a) as being unpatentable over Meier in view of Vimpari, as applied to claim 133 above, and further in view of Agrawal et al., U.S. Patent No. 6,075,777 (hereinafter Agrawal).

64. With respect to claims 135-136, both Meier and Vimpari are silent on further steps comprising:

- receiving a request message for a path-seeking virtual node; and
- transmitting a response to the path-seeking virtual node request message comprising availability as a path to the designated virtual gate and the metric.

In a communication method, Agrawal discloses the steps comprising:

- receiving a request message for a path-seeking virtual node [fig.6 and col.2, Ins.44-60]; and
- transmitting a response to the path-seeking virtual node request message comprising availability as a path to the designated virtual gate and the metric [col.3, ln.20 - col.4, ln.19 and col.7, Ins.39-52].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Vimpari, and further in view of Agrawal by receiving a request message for a path-seeking virtual node and

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transmitting a response to the path-seeking virtual node because this feature can be used to evaluate the cost calculations for the available paths to determine the best path available [Agrawal, col.2, Ins.56-60]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Vimpari, and further in view of Agrawal in order to select the lowest cost (shortest) path for the new mobile if one exists below threshold value [Agrawal, col.2, Ins.53-55].

65. With respect to claims 137-138, both Meier and Vimpari are silent on the path seeking virtual node is a configured virtual node searching for a more efficient path.

In a communication method, Agrawal discloses the path seeking virtual node is a configured virtual node searching for a more efficient path [col.3, ln.20 - col.4, ln.19; col.7, Ins.39-52; and col.2, Ins.13-60].

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Meier in view of Vimpari, and further in view of Agrawal by configuring virtual node searching for a more efficient path because this feature can be used to evaluate the cost calculations for the available paths to determine the best path available [Agrawal, col.2, Ins.56-60]. It is for this reason that one of ordinary skill in the art at the time of the invention would have been motivated to modify Meier in view of Vimpari, and further in view of Agrawal in order to select the lowest cost (shortest) path for the new mobile if one exists below threshold value [Agrawal, col.2, Ins.53-55].

Conclusion

66. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. "Storage, transmission, communication and access to geographical positioning data linked with standard telephony numbering and encoded for use in telecommunications and related services," by Emery et al., U.S. Patent No. 5,727,057.

b. "Dynamic system control via messaging in a network management system," by McHann, Jr. U.S. Patent No. 5,991,806.

c. "Process for establishing telecommunication connections between telecommunication apparatuses in wireless telecommunication systems, in particular between dect-apparatuses of a dect-system," by Bielefeld et al., U.S. Patent No. 6,400,949.

d. "Wide area network mobility for IP based networks," Madour et al., U.S. Patent No. 6,904,025.

e. "Cell selection in mobile radio systems," by SCHRAMM et al., U.S. Patent Application Publication No. 2001/0046879.

f. "Efficient dynamic home agent discovery algorithm and system," by Khalil et al., U.S. Patent No. 6,751,672.

g. "Wireless telecommunication system," by Vannucci, U.S. Patent No. 5,459,727.

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67. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi V. Tran whose telephone number is (571) 272-4067. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarni Maung can be reached on (571) 272-3939. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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